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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/524,344 | 09/01/2005 | Rune Mathisen | 0002124USU/3053 | 4645 |

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| EXAMINER |
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TURK, NEIL N

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| ART UNIT | PAPER NUMBER |
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1743

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|---------------------------------|--|
| Office Action Summary | Application No. 10/524,344 | Applicant(s) MATHISEN ET AL. | |
| | Examiner Neil Turk | Art Unit 1743 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>2/11/05</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

Claim 7 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits. It appears claim 7 should depend from claim 4 to correct multiple dependency.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 are rejected under 35 USC 112, 2nd paragraph. Claims 1-16 are broad and fail to definitely claim their respective methods and apparatuses. The method claims fail to establish method steps for carrying out the claimed invention. The apparatus claims fail to establish the structural limitations for carrying out the recited functions. The claims also do not establish what property is being determined or controlled, how this determination and control is being done, and what structure enables the recited functions.

For example, **claims 3 and 4**, in regard to a method, fail to recite the method steps used for controlling the production plant and product quality.

Claims 10 and 16, in regard to apparatuses, fail to recite the structural limitations that would provide for the functions claimed.

Additionally, in **claim 1** it is unclear what the term “bulk property” means in the claims. It is unclear if applicant intends to claim an intrinsic property, which is a property that doesn’t change based on amount or if “bulk property” refers to a single property or collection of properties. It is also unclear what the term “product property” means, such that the claim limitations call for “on-line measurements of samples of the product...”, such that any data would inherently be “related to a product property”.

It is unclear in **claim 9** what “aggregate properties of the batch” are. From this, it is unclear what is being monitored in the production process. It is also unclear in claim 9 what further method steps are used to “control the process in order to maintain the aggregate properties within specification”.

Claims 2, 5, and 8 recite limitations that lack antecedent basis. For example, claim 2 recites “the batch”, claim 5 recites “the sampling frequency”, and claim 8 recites “the calculation”, “the production rate”, and “relevant measurements”. It is further unclear from these limitations in claim 8 how the production rate is defined and what are the relevant measurements.

Also, in claims which recite limitations to “input data” or “to provide input data”, it is unclear to where this input data is being provided.

The claims should be corrected such that the methods disclose the necessary steps for carrying out the various functions and such that the apparatuses disclose the necessary structural elements for the respective functions.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Tjahjadi (EP 0899556). Tjahjadi discloses an on-line rheometer device. Tjahjadi discloses that in order to improve critical to quality variables such as viscosity, flow consistency, and laboratory response time an on-line rheometer was developed (paragraph 0013). Tjahjadi discloses that the on-line measurements of characteristics such as the viscosity (intrinsic property) of polymer melts are carried out for purposes of monitoring and controlling manufacturing processes involving molten plastics (paragraphs 0001,0002). Tjahjadi also discloses computer means 64 responsive to the temperature, pressure, and weight signals for determining process characteristics of the polymer melt (abstract). Tjahjadi further discloses that pressure and temperature transducers and a weight recorder with the scale send respective output signals (pressure, temperature, and flow rate; input data) to an in/out board of a computer (paragraph 0017). Tjahjadi also discloses that the computer carries out pre-programmed tasks to convert the signals to viscosities in real time (paragraphs 0017, 0018). Tjahjadi also discloses that the invention allows for continuous data of the deposited weight of the stream to be sensed and this data may then be used as an

Art Unit: 1743

input for the determination of the viscosity on a continuous basis (paragraphs 0019, 0024). With regards to claims 6 and 7, Examiner asserts that the disclosure to continuous flow of the polymer melt and "continuous data" and "real time viscosity" in Tjahjadi (paragraphs 0008, 0010, 0017-0019, and 0024) is taken to mean that measurements are being taken continuously in-time (such that data is taken constantly), then Tjahjadi is anticipatory to a measurement taken at least every 10 minutes and at least every 5 minutes, as recited in claims 5 and 6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

Art Unit: 1743

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tjahjadi in view of Davis (5,807,490).

Tjahjadi has been discussed above.

Tjahjadi does not disclose use of an NIR spectrometer to provide input data.

Davis discloses a near-infrared spectrometer to determine output stream composition, where the near-infrared spectrometer may measure pressure drop, among other properties of the output stream (lines 33-35, col. 14).

It would have been obvious to modify the Tjahjadi device to include a near-infrared spectrometer to measure data such as pressure drop such as taught by Davis in order to provide a suitable alternative to the pressure transducer used in Tjahjadi for measuring pressure drop.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil Turk whose telephone number is 571-272-8914. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NT


Jill Warden
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Technology Center 1700